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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,823	09/03/2003	Toshihiro Takeuchi	SHM-14986	4117

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EXAMINER

AMIRI, NAHID

ART UNIT	PAPER NUMBER
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3679

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/653,823	Applicant(s) TAKEUCHI, TOSHIHIRO	
	Examiner Nahid Amiri	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-9, 11, 12, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) 7-9, 15 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11 is/are rejected.
- 7) ☒ Claim(s) 12 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 February 2002 has been entered. Claims 5, 6, 10, and 13 are canceled. Claims 1-4, 7-9, 11-12, and 14-16 are pending.

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention: Group 1, Figs. 1-8B; Group 2, Figs. 9-11; and Group 3, Figs. 12-14.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to

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be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The currently amended claims 7-9 and Newly submitted claim 15 are directed to inventions that is independent or distinct from the invention originally claimed for the following reasons:

Claim 7, lines 2-3, the limitation of "reinforcing member is formed as a solid plate" is drawn to Group II, Figs. 9-11; and claim 15, lines 2-3, "open-ended tubular structure having a series of external grooves formed therein" is drawn to Group III, Figs. 12-14.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 7-9, 15, and 16 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

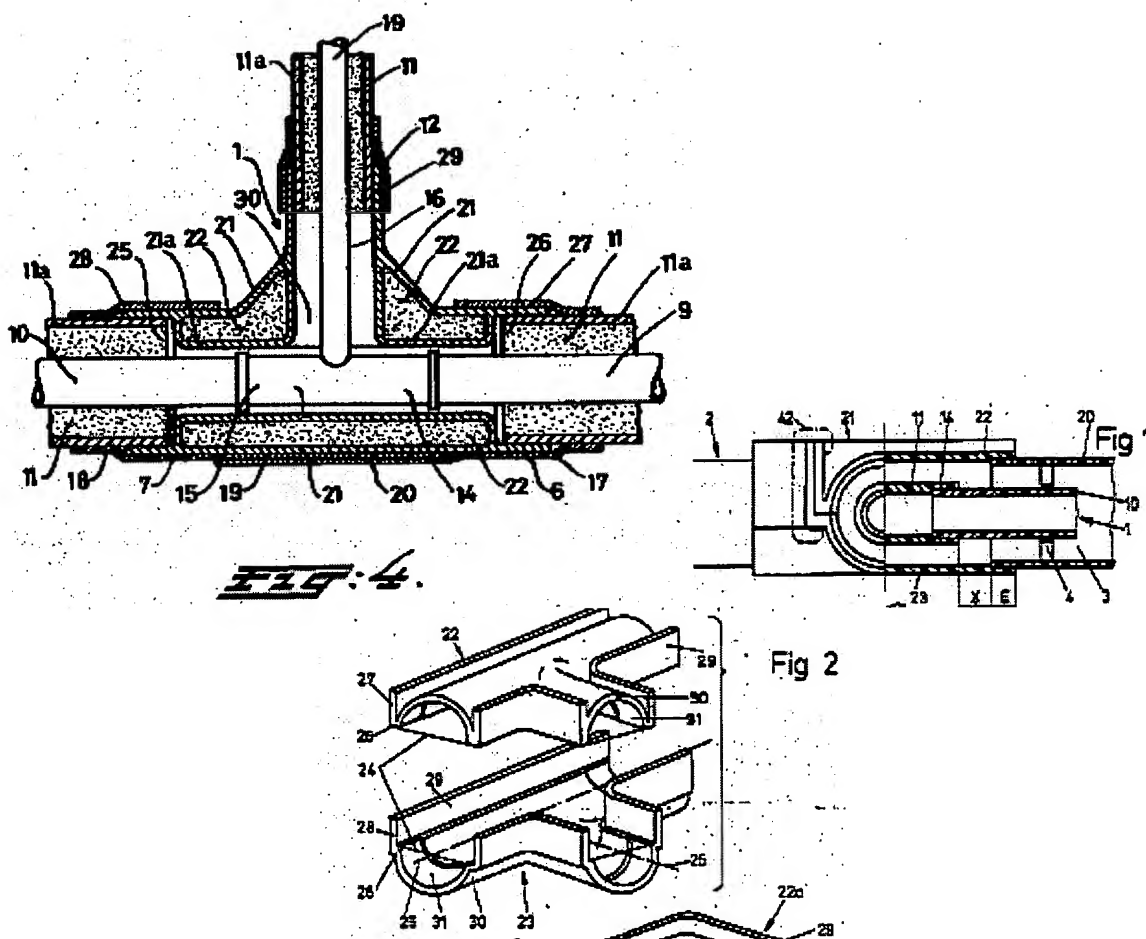
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,488,739 de Lange in view of US Patent No. 4,925,218 Kunz et al.

With respect to claim 1, At the outset, it should be noted that patentability in a product-by process claim is based on the resultant structure of the product and not the recited process steps. de Lange disclose a joint frame joint structure (Fig. 4) comprising a first frame member

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(constituted by lower half portion of a pipe 7) of U-shaped cross section having a first sidewall, a second sidewall, a bottom wall and an opening; a second frame member (constituted by lower half portion of a pipe 11a), similar to the first frame member of U-shaped cross section having an opening, said second frame member having an end portion connected to at least one of the first sidewall and the second sidewall of the first frame member so as to define a joint between the first and second frame members; a reinforcing member (constituted by a combination of pipes 9 and 19) received in both the first and second members, said reinforcing member (9, 19) extending through said joint and into the first member a first predetermined length so as to have a free end adjacent said joint and extending in the second frame member a second predetermined length so as to have another free end adjacent the joint; a plate member (constituted by a combination of upper half portions of the pipes 7 and 11a) closing the openings of the first and second frame members (constituted by lower half portions of pipes 7 and 11a) to form closed cross sections; and a foamed resin filling spaces (11) defined by the plate member, the first and second frame member and the reinforcing member (9, 19). De Lange does not disclose that the reinforcing member is formed from one piece. Kunz et al. teaches a pipeline system (Figs. 1-2) having one piece reinforcing member (constituted by a pipe 10) extending into the first frame member and the second frame member by predetermined lengths at a joint of the first frame member and the second frame member. It would have been obvious to one of ordinary skill in the art at the time of invention was made to form the reinforcing member of de Lange from one piece as taught by Kunz et al. in order to make a conventional pipeline. With respect to the added process recitation pertaining to how the foamed resin is formed, the resultant combination possesses a "foamed resin" and that is all that is necessary to meet the claim.



With respect to claim 2, de Lange discloses (Fig. 4) that the reinforcing member is generally T-shaped.

With respect to claim 3, de Lange discloses the claimed invention except that the reinforcing member is generally L-shaped. Kunz et al. disclose (Fig. 3, column 2, lines 60-61) that the reinforcing member (10) is generally L-shaped. It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the reinforcing member of de Lange being a generally L-shaped in order to use for pipeline corner.

With respect to claim 11, de Lange discloses (Fig. 4) that the second frame member having an end portion connected to one of the first and second sidewalls of the first frame member; and wherein the one of the first and second sidewalls of the first frame member has a hole formed therein; and wherein the hole is larger than a cross-sectional dimension of the

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reinforcing member (9, 19) such that the reinforcing member (9, 19) may freely extend through the hole in the first frame member, and whereby an annular space surrounding the reinforcing member and the one of the first and second sidewalls of the first member at the hole being filled with the foamed resin (11).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over de Lange as applied to claims 1-3 and 11 above, and further in view of US Patent No. 3,948,247 Heilemann.

With respect to claim 4, de Lange discloses (Fig. 4) that plate member and the first and second frame members are made from a first metal material. De Lange does not disclose that the reinforcing member is made from a second metal material, and the first metal material being different than said second metal material. Heilemann teaches a device (column 5, lines 13-16) having a combination of an aluminum plate with a copper pipe, i.e., two different metal materials. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide Kunz with the first, second frame members and the plate member from first metal member which affixed them to one another by welding and the reinforcing member from a second metal member which is different from first metal member as taught by Heilemann so as to provide chemically compatible materials to minimize corrosion.

Allowable Subject Matter

Claims 12 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 12, the closest prior art de Lange (US 4,488,739) discloses the claimed connecting device with the exception of the plate member is generally planar, and wherein the plate member and the first and second frame members are formed from a first metal material and are affixed to one another by welding.

There is no teaching or suggestion, absent the applicants' own disclosure, for one having ordinary skill in the art at the time the invention was made to modify the connector device as disclosed by Lange (US 4,488,739) to have the above mentioned elemental features.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 11,12, and 14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art of record US Patent No. 5,180,068 Vargo; US Patent No. 4,047,348 McSweeney; and US Patent No. 4,555,255 Kissel; are cited to show a connection between two U-shaped frame members.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

na

Nahid Amiri
Examiner
Art Unit 3679
April 16, 2007

Daniel P Stodola

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